

Title (en)  
Hermetic compressor

Title (de)  
Hermetischer Verdichter

Title (fr)  
Compresseur hermétique

Publication  
**EP 2472113 A2 20120704 (EN)**

Application  
**EP 12161222 A 20090508**

Priority  
• JP 2008124324 A 20080512  
• JP 2008124325 A 20080512  
• EP 09746342 A 20090508  
• JP 2009002023 W 20090508

Abstract (en)  
A hermetic compressor includes a closed vessel for storing lubricating oil, an electric-driving element, and a compressing element driven by the electric-driving element. The compressing element includes a cylinder block forming a compression chamber, a piston that reciprocates inside the compression chamber, and an oiling device for supplying the lubricating oil to an outer circumference of the piston. A first oil groove is concavely formed on the outer circumference of the piston, and a second oil groove is concavely formed on a side opposite to the compression chamber relative to the first oil groove. The second oil groove has a spatial volume same or greater than that of the first oil groove. An expanded clearance portion is provided such that a clearance between the piston and the cylindrical hole portion broadens from a top dead point to a bottom dead point.

IPC 8 full level  
**F04B 39/02** (2006.01); **F04B 39/00** (2006.01); **F04B 39/12** (2006.01); **F04B 53/00** (2006.01); **F04B 53/18** (2006.01); **F16J 1/08** (2006.01)

CPC (source: EP US)  
**F04B 35/04** (2013.01 - US); **F04B 39/0005** (2013.01 - EP US); **F04B 39/023** (2013.01 - EP US); **F04B 39/122** (2013.01 - EP US); **F04B 53/008** (2013.01 - EP US); **F04B 53/18** (2013.01 - EP US); **F16J 1/08** (2013.01 - EP US)

Citation (applicant)  
• JP 2002089450 A 20020327 - SANYO ELECTRIC CO  
• JP 2005307795 A 20051104 - MATSUSHITA ELECTRIC IND CO LTD  
• JP H07508333 A 19950914

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2009139135 A1 20091119**; AT E551529 T1 20120415; CN 101855451 A 20101006; CN 101855451 B 20130320; EP 2198161 A1 20100623; EP 2198161 B1 20120328; EP 2472113 A2 20120704; EP 2472113 A3 20131120; EP 2472113 B1 20190123; JP 2011509365 A 20110324; JP 2013060953 A 20130404; JP 2014080982 A 20140508; JP 5187390 B2 20130424; JP 5477455 B2 20140423; JP 5870255 B2 20160224; KR 101230066 B1 20130205; KR 20110002092 A 20110106; US 2011027111 A1 20110203; US 2013230420 A1 20130905; US 2014308140 A1 20141016; US 8794933 B2 20140805; US 8814539 B2 20140826; US 9745973 B2 20170829

DOCDB simple family (application)  
**JP 2009002023 W 20090508**; AT 09746342 T 20090508; CN 200980100977 A 20090508; EP 09746342 A 20090508; EP 12161222 A 20090508; JP 2010504098 A 20090508; JP 2012258137 A 20121127; JP 2014025352 A 20140213; KR 20107025340 A 20090508; US 201313846346 A 20130318; US 201414308263 A 20140618; US 93658809 A 20090508